MEMOIRS ON ORIENTAL RHYNCHOTA.

By G. W. Kirkaldy, F.E.S.

With Plates A, B and C.

(*Read before the Bombay Natural History Society on* 19*th Nov.* 1901).

The present memoir consists principally of notices of a portion of the miscellaneous material from Ceylon sent to me for study by my friend, Mr. E. Ernest Green, Government Entomologist of Ceylon, to whom my best thanks are due. I am indebted to this Society for defraying the cost of the coloured plate; the other has been prepared from drawings made by myself, except the homopterous tegmina which have been photographed by a friend.

Species of which I have recently examined the types are marked with a dagger (†).

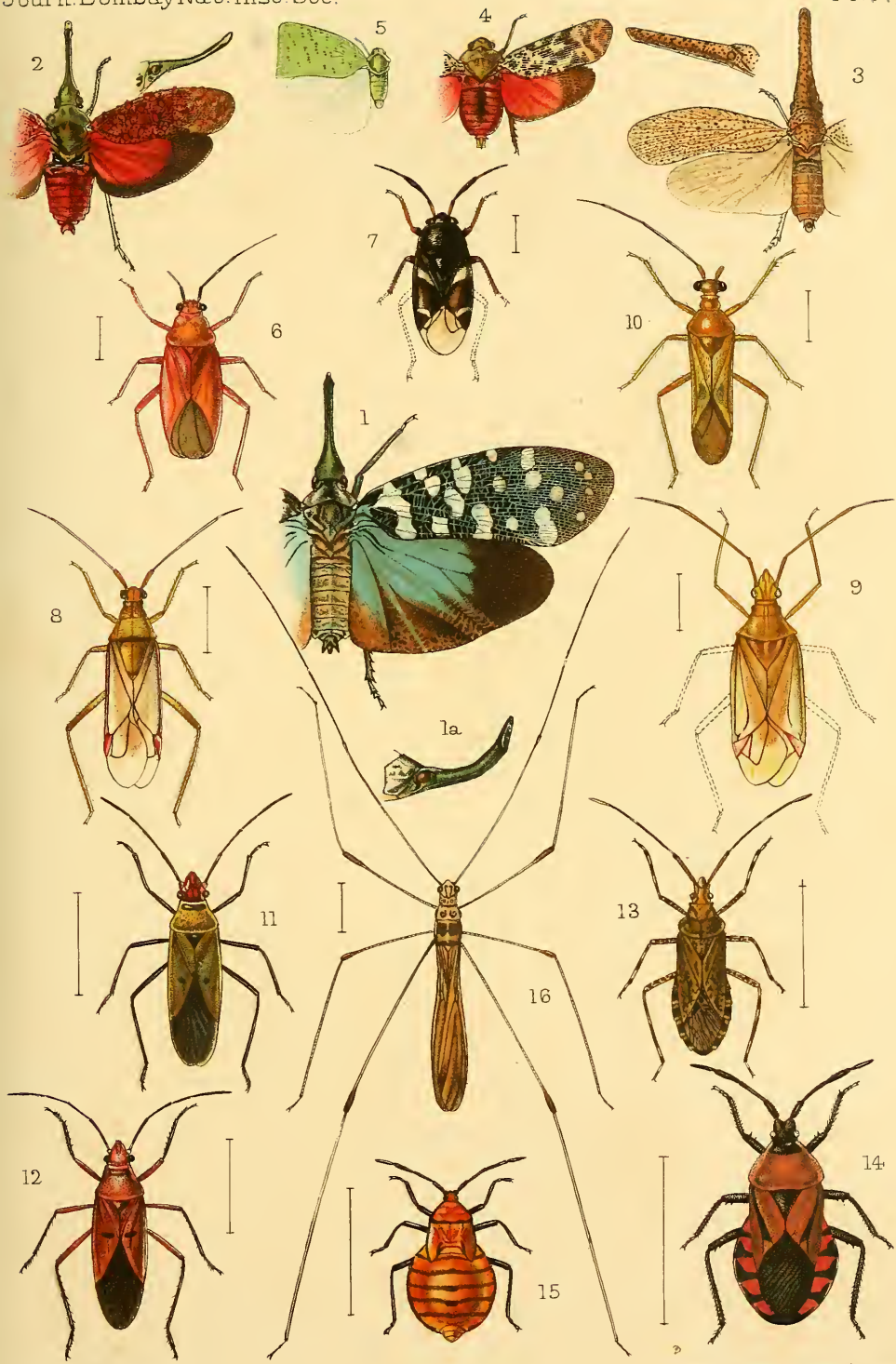
Homoptera.

Family—*Fulgoridæ*.

Sub-family—*Fulgorinæ*.

Modern authors have restricted the genus *Fulgora*, Linn., to the species of which *Cicada candelaria*, Linn., may be considered as the type, *Laternaria*, Linn., being employed for *Cicada laternaria*, Linn, and *Pyrops*, Spin., for *Tettigonia tenebrosa*, Fabr., and its congeners. This does not appear to be correct. *Laternaria* was erected by *Linnæus* in 1764 for some species of his original genus *Cicada*, but as no generic description was adjoined, I have not considered it valid (1). Three years later the same author included these species in his new genus *Fulgora laternaria* being fixed as the type by Lamarck in 1801. In 1839 *Spinola* monographed the family (Ann. Soc. Ent. France, VIII, pp. 133-454, Pls. 10-17), founding nineteen new genera, of which *Pyrops* embraced a heterogeneous assemblage of species for which no type was then fixed. A preliminary notice, however, in which all these genera were diagnosed and types fixed (1839, Revue. Zool., pp. 199-206), has been overlooked apparently by later authors; in this the type of *Pyrops* was stated to be *candelarius* (Linn.), a certainly

(1) *phosphorea*, Linn., is usually quoted as the type of *Laternaria*, but *L. phosphorea*, Linn., 1764 (not *Fulgora phosphorea*, Linn., 1767, which is not a Fulgorid) is the *Cicada laternaria*, Linn., 1758, so that if *Laternaria* be considered valid as a genus, its type must be known as *Laternaria laternaria* (Linn.). In any case the specific name ought not to be altered. It is to be noted that the restoration of *Laternaria* as a genus ought not to interfere with the application here given of *Pyrops* and *Zanna*, for *Fulgora* is syntypical with *Laternaria*.



Horace Knight del. et lith.

Mintern Bros. Chromo. London.

more suitable exponent of the genus than *tenebrosus* (Fabr.), subsequently selected by Amyot and Serville (1843, Hémiptères, p. 491), who at the same time proposed *Hotinus* for *candelarius*. The following synonymy will, therefore, be necessary:

1. FULGORA, Linn., 1767 ; Am. Serv., 1843.
= *Laternaria* (Linn., 1764, haud descr.), Stål, 1866, et auctt.
Type *laternaria* (Linn.), Lam., 1801.
2. PYROPS, Spin., 1839.
= *Hotinus*, Am. Serv., 1843.
= *Fulgora*, Stål, 1866, et auctt.
Type *candelarius* (Linn.), Spin., 1839.
3. ZANNA, n.n.
= *Pyrops*, Am. Serv., 1843, et auctt.
Type *tenebrosa* (Fabr.), Kirk., 1900.

PYROPS.

This genus, as now restricted, is entirely Oriental in its distribution, the majority of the species being more or less local. There are three Sinhalese species, all of which appear to be confined to the island. (2)

P. MACULATUS (Oliv.)

is represented on Pl. A, fig. 1, and of this *Hotinus fulvirostris*, Walker, is doubtless an insignificant variety. The only precise locality I have is "Kandy, June, '97 (*E. E. G.*)."

† P. COCCINEUS (Walker),

perhaps the handsomest species of the genus, is shown on Pl A, fig. 2; I have examined specimens from Kandy (July and Nov.), Dambu and Putlam (*E. E. G.*).

† P. INSULARIS (Kirby)

is somewhat similar to *coccineus* but differs abundantly by the shape of the cephalic process (which is much broader and more parallel-sided, as seen laterally) and by the colour of the tegmina and abdomen. I have seen only the imperfect unique type (in the British Museum) which is figured in Journ. Linn. Soc. Lond., XXIV, Pl. vi, fig. 4.

† P. GIGANTEUS (Butler) and † P. SULTANA (Adams and White.)

Gerstäcker (1895, MT. naturw. Ver. Neu.-Vorp. Rügen, XXVII, p. 19) remarks: "Wodurch sich.....*Fulgora gigantea*, Butler, von *Hotinus*

(2) *P. maculatus* is recorded by Westwood (T. Linn. Soc. Lond., XVIII, p. 140) from India, but this has not been confirmed.

sultana, Adams and White, unterscheiden sollen, ist weder aus de Abbildung noch Beschreibung zuersehen."

The types of both species are, however, in the British Museum, and the species, although very closely allied, are sufficiently distinct.

giganteus.	*sultana.*
Larger—	Smaller—
A number of pinkish spots on the basal half of the tegmina.	No pinkish spots on the basal half of the tegmina.
No whitish spots on the apical half of the hindwings.	A number of whitish spots on the apical half of the hindwings.
Basal half of tegmina yellowish rather than blackish.	Basal half of tegmina black.

These slight differences are constant in the 10 ex. of *giganteus* and 3 examples of *sultana* which I have seen. Butler's figure of *giganteus* does not give a good idea of the colouring of the tegmina (1874, P. Z. S., Pl. 15, fig. 2), in which the yellow nervures are sufficiently pronounced to afford a yellowish rather than a blackish appearance to the basal half. I possess a small specimen of *sultana* from Kina Balu, *Borneo*.

ZANNA

occurs in the Ethiopian and Oriental Regions; the species are usually local and scarce. The two Sinhalese are closely allied, but while the upper surface of the abdomen is blackish in AFFINIS (Westw.), it is pale flavous in DOHRNI (Stål). The latter is figured on Pl. 1, fig. 3.

Z. TERMINALIS (Gerst.)

= *Pyrops terminalis*, Gerst., 1895, MT. Naturw. Ver. Neu.-Vorp. Rügen, XXVII, p. 19.

I have seen specimens from British Borneo, Sarāwak, Singapore and Penang. It is closely allied to *Z. nobilis* (Westw.) and differs from the typical section by the very long, curved, tuberculate, strongly carinate capital process and by the somewhat feebly carinate scutellum. The neuration of a specimen in Mr. Stanley Edwards's collection is abnormal in the right tegmen, the interior basal nervure of the clavus bifurcating near its apex, the interior veinlet meeting the apical nervure of the clavus apical to the junction of the latter with the exterior veinlet.

POLYDICTYA KRISNA, sp. nov.

Pl. A, fig. 4.

Head not produced anteriorly, rostrum reaching to middle of abdomen, posterior tibiæ with 6-7 spines.

Head, pronotum, and scutellum greenish-testaceous, metanotum and abdomen sanguineous, genital segments luteous. Femora brownish, tibiæ and tarsi black, the former banded with brownish at base and in the middle. Rostrum fuscous. Ocelli stramineous. Eyes and antennæ brownish-testaceous. Tegmina: basal two-thirds ivory-white, nervures greenish; apical third brownish; whole surface plentifully spotted with black. Hind wings sanguineous, apical third brown, with sanguineous or brownish nervures.

Long. 11½ mill., Exp. tegm. 35½ mill.

CEYLON: Kandy [type] Dec. '97 and Pundaluoya, Dec. '97 (E. E. Green—collns. Green and Kirkaldy). I think a poor specimen from INDIA (British Museum) belongs to this species.

Probably closely allied to *P. pantherina*, Gerst., l. c., p. 26., from Ceylon, but smaller and different in colour.

KALIDASA SANGUINALIS (Westw.)

Aphana sanguinalis, Westw., Ann. Mag. Nat. Hist. (2), VII, p. 208 (1851).

Phoronis sanguinalis, Stål, 1863, Stett. Ent. Zeit., *Kalidasa sanguinalis*, *Kirkaldy*, 1900, Entom. XXXIII, p. 243.

As this species was not included in any of Atkinson's papers, or, indeed, lately, anywhere else (to my knowledge), except a reference in Kirby's Catalogue (l. c., p. 133), I reproduce the original description which is contained in a now scarce Journal. "Sanguinea, capitis rostro (3) filiformi recurvo supra prothoracem recumbenti, nigro; alis anticis nigro maculatissimis, costa maculis circa 10 majoribus quadratis, apicibus castaneis immaculatis; alis posticis albofarinosis, maculis apicibusque pallide albidis; abdomine supra dense albofarinoso, corpore toto subtus cum promuscide sanguineo; tibiis tarsisque 4 anticis nigris. *A discolori*, Guér. proxima, Exp. al. 2½ unc., CEYLON.

(3) *Rostrum*, Westw.=*cephalic process* mod. auctt; *promuscis*, Westw.=*rostrum* mod. auctt.

Sub-family DICTYOPHARINÆ.

DICHOPTERA, Spin.

Stål's figure of the tegmen (1866, Hem. Afr., IV, Pl. 1, fig. 3) is incorrect, the transverse claval nervure (by the presence of which the Swedish Master distinguishes this genus and its allies from *Dictyophara*, Germ., etc.) not being represented. Brongniart (4) has figured beautifully the flight organs in *D. hyalinata* (Fabr.), and a tegmen is also correctly enough represented in Spinola's Monograph (Pl. 13, fig. 3), but as both these works will be inaccessible to a large number of workers, the neuration of the tegmina of the allied *D. hampsoni*, Distant, is portrayed on Pl. 2, fig. 1.

D. HAMPSONI, Dist.

D. hyalinata, Kirby, 1891, J. Linn. Soc., XXIV, p. 133 (nec. Fabr.)

D. hampsoni, Dist., 1892, Trans. Ent. Soc., p. 278.

The true *hyalinata* does not apparently occur in Ceylon; *hampsoni* is separable at once by the distinctly longer cephalic process.

PIBROCHA, gen. nov. (5)

Dictyopharæ affinis, capite processu longo producto; clavo inter nervuram interiorem et clavi suturam nervula transversa instructo, præterea nervulis transversis destituto; costa hand dilatata, stigmate opaco, binervi; Tegminibus apicem versus nervulis transversis instructis. Pedibus longiusculis, tibüs posticis 3- aut 4-spinosis, tibüs anticis femoribus multo longioribus. Typo *Dictyophara* (?) *egregia*, Kirby.

Head porrect, eight times as long as pronotum (medianly), basal third of dorsal part not much narrower than the two eyes together, finely and closely rugulose transversely, carinate medianly and laterally, the latter sinuate; somewhat superficially carinate transversely behind the central line of the eyes, the head above behind this carina being produced laterally, and as wide at the base as the anterior margins of the pronotum. At about one-third of its length the head is suddenly contracted, the central carina of the dorsal part becoming quite obsolete on the basal half, *i.e.*, of the contracted portion, and somewhat superficial on the apical half; the lateral carinæ are subparallel up to a short space from the apex, when they suddenly diverge

(4) Recherches surles Insectes fossiles des Temps Primaires (1893) 1894, Vol. I, p. 275 Vol. II, Pl. 28, figs. 8 & 9.

(5) *Pibroch*, English corruption of the Gaelic *Piobaireachd*, gathering music performed on the pipes.

at an obtuse angle; apex truncate, carinate transversely. Frons quadricarinate, the lateral carinæ meeting the lateral carinæ of the dorsal surface at the apex in a subacute angle, the two central carinæ continuing to the apex where they meet fornicately, much elevated above and beyond the rest of the frons. The space between the two central and two lateral, frontal carinæ is transversely carinate near the apex, the apical portion concave and its apical margin rounded. Clypeus laterally carinate. Ocelli large and distinct. Rostrum reaching to middle of abdomen. Antennæ: 1st segment of peduncle very short, second long, stout, subglobular, covered with sensory organs, armed extero-laterally with a long acute spine. Pronotum and scutellum longitudinally tricarinate. Tegmina reaching far beyond the apex of the abdomen; furnished with a number of transverse nervures towards the apex; clavus with a short transverse nervure between the claval suture and the interior claval nervure, otherwise without transverse nervules. Costa not dilated, stigma opaque, with two nervures; longitudinal nervures of the apical half of tegmina spinulose. Anterior and posterior tibiæ much longer than their respective femora, posterior tibiæ 3- or 4-spinose, connexiva very narrow, carinate on both sides, and in the depression thus formed lie the large spiracles. (6)

The genus is closely allied to *Dictyophara*, Germar, but, beyond other differences, is readily recognisable by the transverse nervure in the clavus, which thus allies it to *Dichoptera*, Spin. I know only one species, the type, *viz.*:

P. EGREGIA (Kirby)

Pl. B, fig. 2.

= † *Dictyophora* (?) *egregia;* Kirby, l.c., p. 135, Pl. v, fig. 4. I have examined the type and specimens from *Pundaluoya* and *Harragam* (Ceylon, *E. E. G.*).

Sub-family ISSINÆ.

= Eurybrachyinæ auctt.

EURYBRACHYS CRUDELIS, Westw.

Ann. Mag. Nat. Hist. (2) vii, p. 208 (1851).

This is another species which has not, to my knowledge, been described or referred to, except in Kirby's Catalogue (l. c., p. 133), since its original publication half-a-century ago.

(6) I would have liked to figure the weird head and the connexiva, etc., but these insects do not dry well and the delineation of the parts has been postponed till I can examine fresh or alcoholic material.

" Pallide fusco-albida, alis anticis dilatatis margine anticis sinuato, venis obscurioribus, strigis punctisque numerosis minutissimis nigris; alis posticis niveis, dimidio basali coccineo, maculisque 3 nigris rotundatis, prope marginem apicalem; pedibus corpore concoloribus, tibiis dilatatis, nigro parum irroratis, posticis interdum nigris; promuscide ad pedes intermedios tantum extensa. *E. insigni* Westw., proxima. Exp. 2 unc. Ceylon."

Sub-family ASIRACINÆ.

= Delphacida, Stål.

PUNDALUOYA, gen. nov.

Antennis sat brevibus, plus minus incrassatis, non autem dilatatis, segmento secundo primo longiore; pronoto capite latiore; genis haud parallelis. Scutello tricarinato. Tegminibus planiusculis. Pedibus anterioribus haud dilatatis. Typo *Delphaci ernesti*, Kirby.

Dorsal part of head very short, hemispherical, medianly longitudinally carinate, anterior and lateral margins carinate. Eyes large and oblique, ocelli distinct. Frons hexagonal, about one-third longer than wide, with a median longitudinal carina which forks close to the base; all the margins carinate. Clypeus carinate laterally and medianly. Antennæ: second segment of peduncle one-half longer than the first, subtuberculate furnished with short spiny hairs. Pronotum very short, transverse, hexagonal, medianly longitudinally carinate, the antero- and postero-lateral margins carinate, the three carinæ entire and subparallel. Scutellum much longer than pronotum, tricarinate. Tegmina longer than the whole body; clavus subgranulate, the granulations piliferous; nervures on apical half of tegmina sparsely furnished with hairs. Posterior tibiæ with a single spine. Not very closely allied to any other genus, though apparently belonging near the *Ugyops* Guérin group.

Type P. ERNESTI (Kirby).

Pl. B, fig. 3.

† *Delphax ernesti*, Kirby, l. c., p. 140, Pl. v, fig. 14.

N.B.—In Kirby's description, the length " 4-5 lin." is a misprint for " 4-5 mill."

Sub-family POEKILLOPTERINÆ.

= Flatida + Ricaniida, Stål.

POCHAZIA ANTIGONE, sp. nov.

Brunnea, tegminibus margini apicali leviter convexo, margini costali leviter sinuato, membrana costali albomaculata. Long. corp. 8½-9¼ mill., long. (tegm. inclusis) 14 mill., exp. 31½ mill.

Ceylon: Kandy (July. 1897); Haragam (Aug. 1897); collns. Green and Kirkaldy.

Frons with strong lateral carinæ, the central carina apically obsolete; apical margin of tegmina slightly, but noticeably, convex; costal margin slightly sinuate. Brownish- or reddish-testaceous; tegmina dark-brownish, basal half of costal membrane black a long-isosceles white spot on costal membrane about the middle; apical margin widely infuscate, two narrow transverse cloudy lines nearer the middle of the tegmen. Hind wings of the general ground colour of the tegmina.

Allied to the variable *P. obscura* (Fabr.), but differs by the sinuous costal margin, the apically obsolete central carina and the strong lateral carinæ of the frons; the brownish- or reddish-testaceous abdomen, and the noticeable white spot on the costal membrane.

Ricania melichari, n. n., for *R. subfusca*, Mel., 1898, Verh. Zool-bot. Ges. Wien., p. (*nec* Stål, 1865, O. V. A. F., p. 162).

Flata ocellata (Fabr.)

Pl. A, fig. 5.

As this well distributed species is the type of the genus and has not been accessibly figured, a coloured representation is now given. The size and number of the tegminal spots varies somewhat.

Flata cornutipennis, n. n.

= † *Phylliphanta acutipennis*, Kirby, 1891.

nec † *Cromna acutipennis*, Walker, 1851.

Phromnia marginella (Oliv.).

Fulgora marginella, Oliv., 1791, and Enc. Meth, VI., 566.

Phromnia marginella, Ind. Mus. Notes, 1891, II, p. 95, Pl. XVI.

Phronima (7) *marginella* and *deltotensis*, Kirby, l. c., p. 155.

P. deltotensis appears not to differ structurally from the greenish *marginella*.

Hansenia, gen. nov.

Cerynicæ, Stål, affinis; antennis pedunculi segmentis primo ultra genarum margini laterali multo extendenti, secundo primo circa $\frac{1}{5}$ plo longiore. Tegminibus maxime decumbentibus, serie una regulari nervularum instructa; membrana costali dilatata, basi angustata. Abdomine compresso. Typo *Pœciloptera glauca*, Kirby.

(7) Walker & Kirby spell this Phronima, which is, however, a crustaceous genus.

Frons longitudinally convex, genæ anteriorly rotundate, neither (frons nor genæ) produced in the middle. Ocelli distinct. Antennæ ; segments of the peduncle elongate, first extending considerably beyond the lateral margins of the genæ, second about one-fifth longer than the first. Tegmina very greatly decumbent, very ample, sensibly widened towards the apex, rotundate, with a single regular series of transverse nervures towards the apex ; corium, etc. (except at the base) with numerous transverse nervures ; many of the longitudinal nervures furcate. Costal membrane dilated, basally narrowed more than twice as long in the middle as the costal area. Posterior tibiæ with one spine. Abdomen compressed.

I have great pleasure in dedicating this genus to my friend, Dr. H. J. Hansen, to whom Homopterists are indebted for the essay upon the more minute structure of the auchen norrhyncha. It is allied to *Cerynia*, Stål, but differs abundantly in the neuration, etc. It is superficially exceedingly like *Copsyrna*, Stål, as represented by *C. tineoides* (Oliv.) [= *C. stollii* (Spin.)], but in the latter the neuration of the tegmina is quite different, there being no regular row of transverse nervures near the apex, while the head is much wider and the first segment of the peduncle very short. *C. tineoides* is at once distinguishable (beyond the structural characters) by the curved whitish streak and the whitish specks on the tegmina. The only species of *Hansenia* known to me is

H. PULVERULENTA (Guér.) (7 *a*)

= *Pœciloptera pulverulenta*, Guérin (? 1843), Icon. Règne Anim., p. 361.
= † *Pœciloptera glauca*, Kirby, 1891, l. c., p. 154, Pl. VI, fig. 14.

Apparently confined to Ceylon. "It sometimes covers the leaves of certain *Eugenia* trees upon which the larva feeds, and when disturbed flies out in clouds." (*E. E. G.*, Dec. 13, '99.)

Family CICADIDÆ.

DUNDUBIA LELITA, sp. n. (8)

♀ Obscure brownish-castaneous, with golden yellow pubescence ; ocelli rubid. Head (except the anterior and posterior central parts)

I had commenced the figuring of the details of neuration, etc., of several Sinhalese Poekillopterinae, but as I find, since this paper was in proof, that my friend Dr. Melichar of Vienna is monographing the group, these details have been omitted here.

(8) *lelita*, one of the thirty-six musical keys mentioned in the holy Hindu book 'Soma.'

and pronotum (except some obscure markings and two submedian longitudinal black stripes) ochraceous, posterior margin wholly ochraceous ; three longitudinal black lines and two yellow incurved raised lines on the mesonotum. Underneath obscure brownish-castaneous ; rostrum pale (except apical segment). Costa brownish-castaneous, basal cell ochraceous. Apex of exterior ulnar area narrower than in *D. mannifera* (Linn.), Dist.

Opercula short, not reaching apex of 2nd abdominal segment, subtriangular. Anterior femora with two strong spines.

Long. 30 mm., exp. 89 mm.

British Borneo (collns. Edwards and Kirkaldy).

This species seems to belong to the typical subgenus by the short rostrum which just passes the intermediate coxæ, but it differs from its consubgeners by the less swollen and narrower frons and by the ocelli being about twice as far from the eyes as from one another ; unfortunately, I have seen three females only.

Cryptotympana edwardsi, sp. n. (9)

Belongs to Distant's Section F. (Monogr. Orient. Cic., p. 88.) ♂. Shining blackish ; eyes, a central longitudinal line on the head and anterior part of pronotum, a sublateral wedge and the posterior margin of pronotum (except in the middle), an undulatory line on mesonotum, cruciform elevation, etc.—ochraceous ; tympanal coverings ochraceous ; soiled with blackish laterally. Beneath (including the opercula) ochraceous ; head and rostrum, basal abdominal segment, a spot at apex of penultimate and whole of ultimate segment, anterior and intermediate femora outwardly, anterior tibiæ tarsi and all the claws—black. Tegmina and wings hyaline ; costa (except ochraceous basal part), basal cell, base of anal area, etc.—blackish ; nervures, ochraceous. Head rather swollen in front ; anterior femora armed with two strong spines (basal one the larger), and two minute spines before the anterior large spine ; opercula long, reaching to the middle of the 4th segment, their inner margins contiguous for about their basal half, then diverging curvedly, incurving about the middle of the second segment, apices remote, subacute.

Long. 46½ mill., lat. 28 mill., exp. 115 mill.

'India' (coll. *Edwards*).

(9) Named after Mr. Stanley J. Edwards, F.L.S., who kindly entrusted me with some interesting material from India and Borneo.

Apparently very different from the other species of the genus by the form of the opercula.

HETEROPTERA.

Artificial Group Cryptocerata.

I had hoped to include in this memoir a synoptical revision of the Oriental species of the Notonectidæ and Corixidae, but I have had to defer this, owing to my present inability to fix the specific limits of several species of *Enithares*, Spin., *Anisops.*, Spin., *Nychia*, Stål, etc. It appears almost impossible to deal satisfactorily with these genera without alcoholic material, which has been available in a few cases only.

Family Miridæ.

=Capsidæ auctt. (10)

Thaumastomiraria, divis. nova.

Head vertical, transverse as seen from above, transversely depressed near the base between the eyes. Pronotum with a narrow apical collar, posteriorly elevated, lateral margins sinuate, antero- and postero-lateral angles obtuse. Cuneus somewhat indistinct except at the lateral margins. Membrane with a single entire longitudinal nervure. Hindwings without a hook in the cell. Legs simple, tarsi with 3 segments, apical the thickest, with long curved claws and large aroliæ. Abdomen short, not reaching nearly to the apex of the elytra.

Not at all closely allied to any other divisions of the Miridæ known to me, and at once distinguished by the entire longitudinal nervure in the membrane.

Thaumastomiris, gen. nov. (11)

Head vertical, transversely depressed between the eyes, transverse as seen from above, not longitudinally sulcate. Eyes large, together almost equal to the width of the head at base. Antennæ : 1st segment longer than head above, 2nd three-eighths longer than the first, 3rd slightly longer than first, 4th slightly longer than the second ; fourth thinner than third, both much thinner than 1 and 2 ; second thinner than first. Rostrum reaching almost to posterior coxæ. Pronotum densely punctured, narrowly collared in front, callose submedianly immediately behind the collar ; posterior half subconvex ; anterior

(10) *Miris*, Fabr., 1794, is the oldest genus in the family, *capsus*, dating 1803.

(11) The component '*Miris*' does not infer a close relationship or resemblance to the genus *Miris*, Fabr., but refers to its affinity to the Miridæ as a family. As it is the only known genus the division, I reproduce the divisional characters in the generic description.

margin roundly excavated, lateral margins sinuate, posterior margin truncate and slightly sinuate; anterior and posterior angles obtuse. Scutellum not sulcate. Elytra extending far beyond apex of abdomen, subrugose with short, somewhat close, hairs (not pubescence); cuneus not distinctly separated from corium, except at the lateral margin, in shape very long triangular, apex curved round to nearly the apex of the membrane, which is ovoid with a single strong nervure running longitudinally (slightly exterior to the median line) and terminating at the cuneus: slightly behind the apex of the latter. Wings without a hook in the cell. Legs simple, femora slightly incrassate. Arolia large, round, widely separated; claws long, curved. Underside and legs with somewhat long, pale hairs. Anterior coxæ rather more than twice as long as wide. Tarsi with 3 segments, the apical one thickest.

T. SANGUINALIS, sp. n. (type).

Pl. A, fig. 6 & Pl. B, fig. 4.

Sanguineous, membrane infuscate. Eyes deep-crimson; antennæ blackish, 1st segment more or less reddish; tarsi blackish. Wing nervures more or less infuscate, except the costa which is sanguineous.

Long. 5 mill.

Frequents *Crinium asiaticum*, Peradeniya, CEYLON (E. E. Green). The types (♀) have been placed in the British Museum.

Division Laboparia.

BERTA, gen. nov.

Pilose, head very small, almost roundly perpendicular. Antennæ: second segment subincrassate, thickest *towards* (but not *at*) the apex, two-fifths longer than the first, two and-a-half times as long as the third, which is a little slenderer than the first and somewhat curved; third and fourth subequal in length, fourth thinnest. Rostrum reaching to intermediate coxæ. Pronotum and prosternum very convex, the former not constricted anteriorly, and margins rounded, not sinuate nor reflexed, posterior margin very slightly sinuate. Scutellum large. Type *Capsus lankanus*, Kirby. Not closely allied to any Laboparian known to me.

B. LANKANA (Kirby).

Pl. A, fig. 7 & Pl. B, fig. 5.

= † *Capsus lankanus*, Kirby, l. c., p. 107.

Of this very pretty myiophanous bug, I have examined two females from Ceylon, *viz.*, the type from Nitagala (British Museum,

E. E. Green) and a specimen from Pundaluoya (*E. E. Green*, Feb. 1899) from which the figures are taken.

Division Capsaria.

HYALOPEPLUS, Stål.

This genus seems to be well represented in the Oriental and Polynesian Regions. To it should be referred CAPSUS RAMA, Kirby, l. c., p. 106, which is now delineated on Pl. 1, fig. 8 and Pl. 2, fig. 6. I have seen *H. rama* from CEYLON, Pundaluoya ; and Morowa, Korale (Feb. 1900) Reg. No. 127 Tea, *Peradeniya* Oct. 1898 (E. E. G.) and INDIA, Sikkim.

Capsus lineifer, Walker, from Malacca belongs either to this genus or to a new one very closely allied, while for *C. discoidalis*, Walker, rom Malacca and Singapore, a new genus, closely allied to *Hyalopeplus*, will be necessary.

ISABEL., n. g.

Hyalopeplo affinis sed a forma pronoti, antennarum, membranæ arearum, facillime distinguenda.

Antennarum segmento secundo primo fere triplo longiore, tertio duplo longiou, primo cum quarto subæquali ; primo crassissimo sed haud maxime incrassato quam apud *Hyalopeplum*. Rostro fere ad apicem coxarum posticarum attingente. Pronoti angulis posterolateralibus prominentibus, acutis. Elytra quam apud *Hyalopeplum*, sed membranæ cellula interiore perlongo, ultra cunei apicem extendeus, angulo apicali acuto ; cellula exteriore maiore quam apud *Hyalopeplum*. Alæ posterioris cellula sine hamo. Typo *Capso ravana*, Kirby.

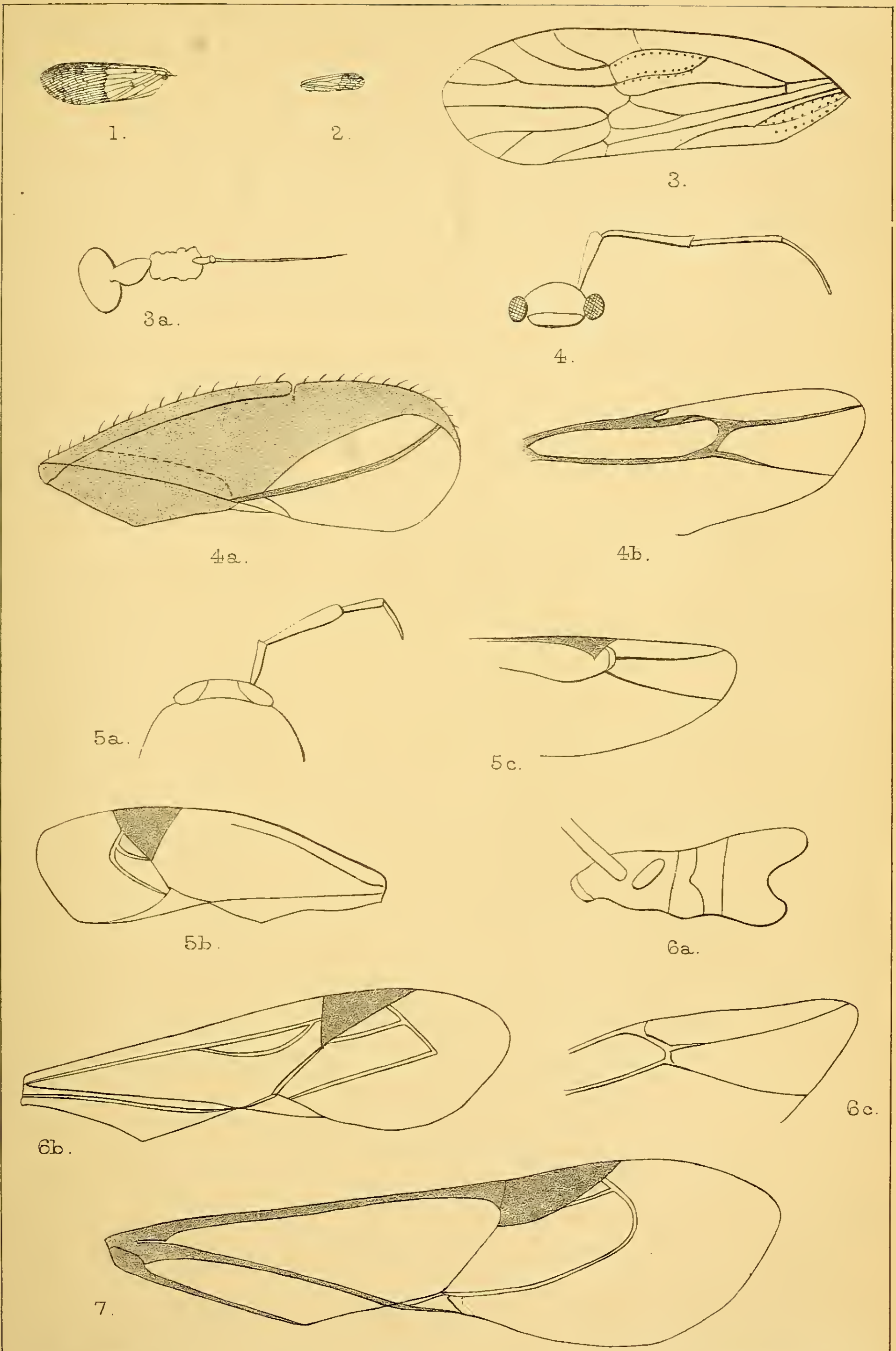
Head triangular subhorizontal ; rostrum reaching almost to apex of posterior coxæ ; antennæ : second segment nearly three times as long as first, and twice as long as third, first and fourth subequal ; first the thickest but not greatly incrassate. Pronotum collared in front, constricted a little before the middle, transversely rugose, postero lateral angles salient, acute. Elytra as in *Hyalopeplus*, but the exterior cell of the membrane is much larger ana the interior cell much longer, and is acute-angled apically. Wing cell without a hook.

ISABEL RAVANA (Kirby).

Pl. A, fig. 9 and Pl. B, fig. 7.

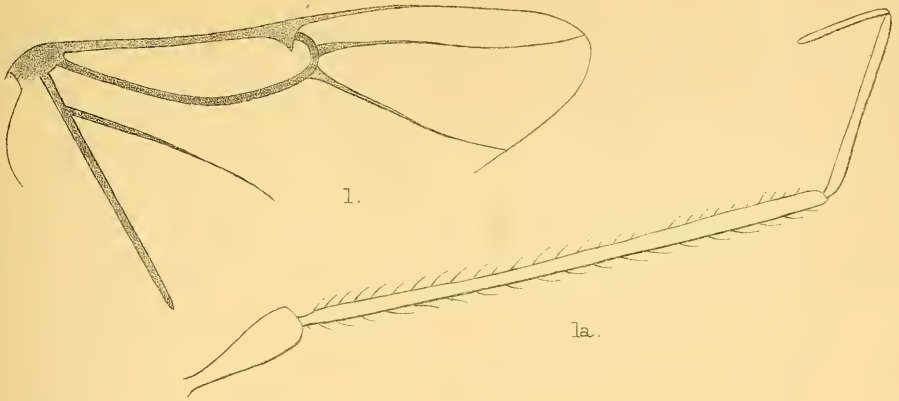
This beautifully sculptured little insect is superficially very like *Hyalopeplus rama*, but differs considerably in detail.

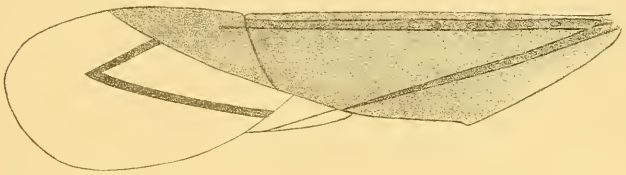
(*To be continued.*)

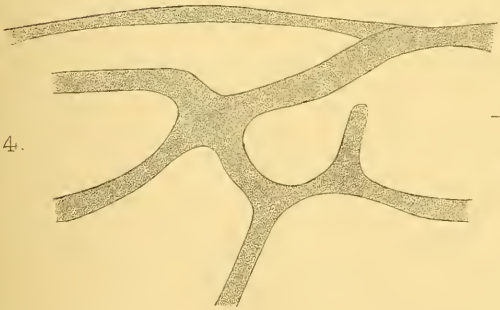


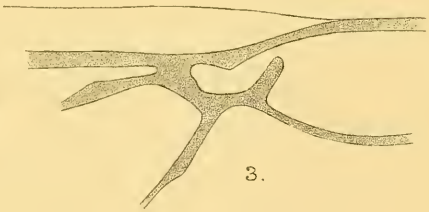
1&2. J. S. photo., 3-7. G. W. K. del.   Mintern Bros lith. London.

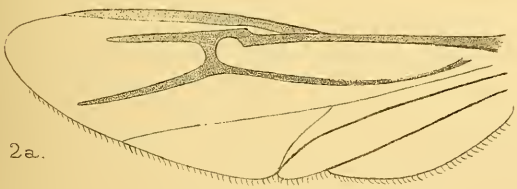
ORIENTAL RHYNCHOTA.











G.W.K. del. Mintern Bros. lith. London

ORIENTAL RHYNCHOTA.